

0995661.1.13001

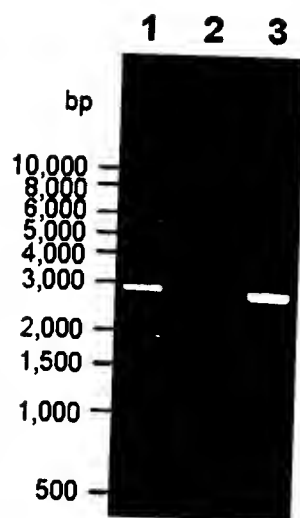


FIG. 1

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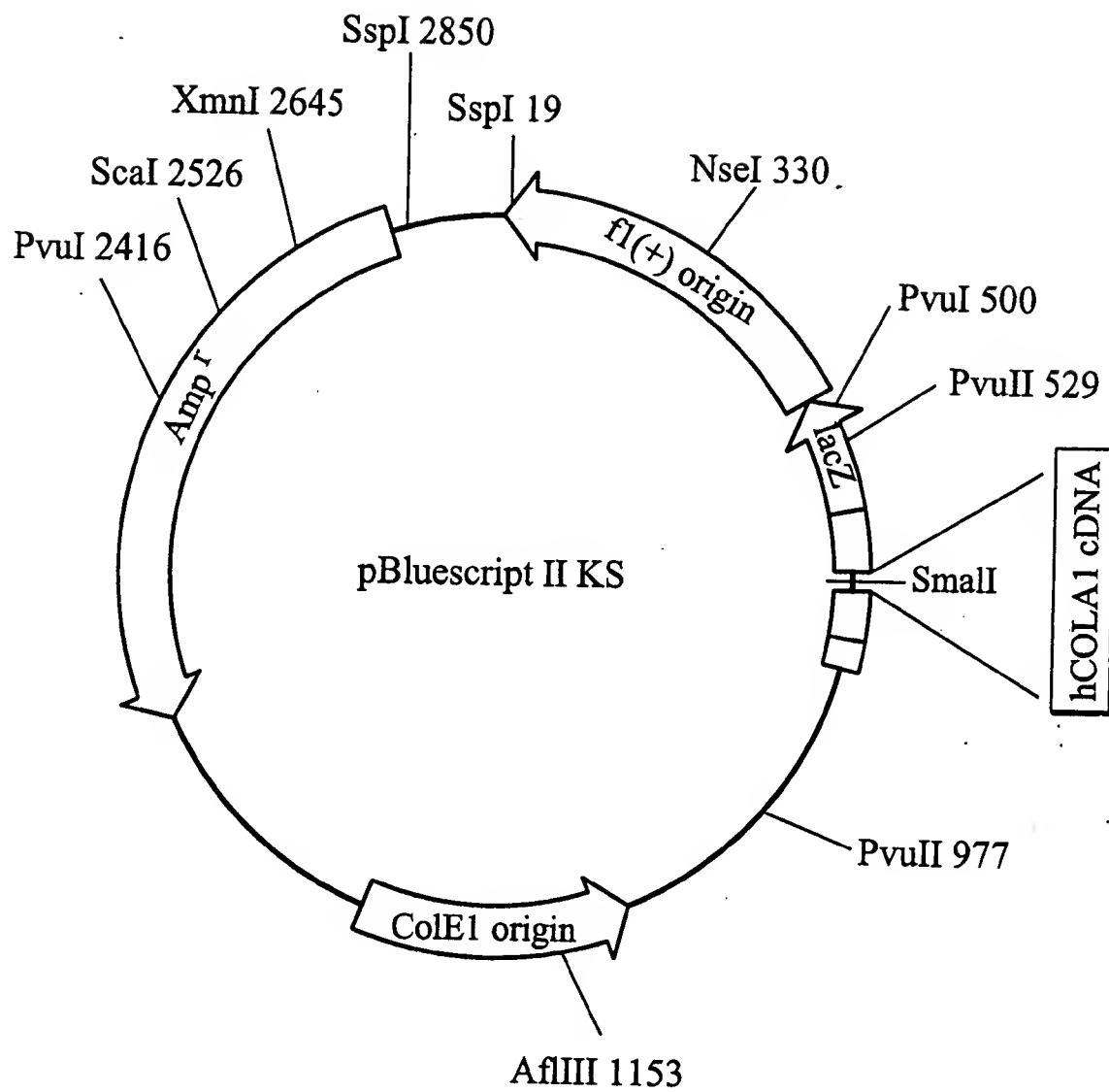


FIG. 2

FIG. 3

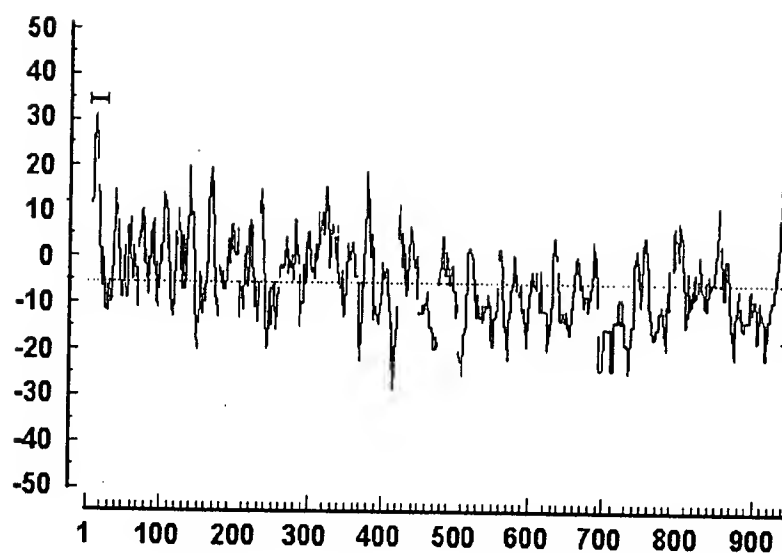


FIG. 4



- von Willebrand factor A domain
- Thrombospondin N-terminal-like domain
- Collagenous domain

FIG. 5

| | | |
|-------------|---|-----|
| hCOLA1 .PRO | M A H Y I T F L C M V L L V L L L O N S V K L A E | 23 |
| Col9a1.pro | M K . . . T C W K I P V F F V F V C S F L E P W A S A A V K R R | 28 |
| Col19a1.pro | M R L T G P W K L . . . W L W M S I F L L P - A S T S V T V R | 27 |
| hCOLA1 .PRO | D G E V R S S C R T A P T D L V F L L D G S Y S V G P E N F | 53 |
| Col9a1.pro | P R F P V N S N S N G G N E L C P K I R L G - Q D D L P G F | 57 |
| Col19a1.pro | D K T E E S C P I L R I E - G H Q L T - Y | 46 |
| hCOLA1 .PRO | E I V K K W L V N I T K N F D I G P K F I Q V G V V Q Y S D | 83 |
| Col9a1.pro | D L L S Q F Q V D - K A A S R R A I Q R V V G S A T | 82 |
| Col19a1.pro | D N I N K L E V S - . . G F D L G D S F S L R R A F C E S D | 73 |
| hCOLA1 .PRO | Y P V L E I P L G S Y D S G E H L T A A V E S I - L Y L G G | 112 |
| Col9a1.pro | L Q V - A Y K L G N N V D F R I P T R N L Y - . . | 103 |
| Col19a1.pro | - K T - C F K L G S A L L I R - D T I K I F - . . | 92 |
| hCOLA1 .PRO | N T K T G K A I Q F A L D Y L F A K S S R F L T K I A V V L | 142 |
| Col9a1.pro | - . P S G L P E E Y S F L T T F R M T G S T I K K N W N I W | 131 |
| Col19a1.pro | - . P K G L P E E Y S V A A M F R V R R N A K K E R W F L W | 120 |
| hCOLA1 .PRO | T D G K S Q D D V K D A A Q A A R D S K I T L F A I G V G S | 172 |
| Col9a1.pro | Q I Q D S S G K E Q V G I K I N G Q T Q S V V F S Y - . . | 157 |
| Col19a1.pro | Q V L N Q Q N I P Q I S I V V D G G K K V V E F M F - . . | 146 |
| hCOLA1 .PRO | E T E D A E I R A I A N K P S S T Y V F Y V E D Y I A I S K | 202 |
| Col9a1.pro | K G L D G S L Q T A A F S N - . L S S L F D S Q W H K I M L | 185 |
| Col19a1.pro | Q A T E G D V L N Y I F R N R E L R P L F D R Q W H K L G I | 176 |
| hCOLA1 .PRO | I R E V M K Q K L C E E S V C P T R I P V A A R D E - . . R | 229 |
| Col9a1.pro | G V E R S S A T L F V D C N R L E S L P I K P R G P I D I D | 215 |
| Col19a1.pro | S I Q S Q V I S L Y M D C N L L A R R Q T D E K D T V D F H | 206 |
| hCOLA1 .PRO | G F D I I L G L D V N K K V K R I Q I S P K K L K G Y E V | 259 |
| Col9a1.pro | G F A V L G K L A D N P Q V S V F F E L Q W M L L H C D P L | 245 |
| Col19a1.pro | G R T V I A T R A S D G K - P V D L E L L H Q L K L Y C S A N | 235 |
| hCOLA1 .PRO | T S K V D L S - E L T S N V F P E - G L P P S Y V F | 283 |
| Col9a1.pro | R P R R E T C H E L P A R I T P S Q - G L P P S Y V F | 263 |
| Col19a1.pro | L I A Q E T C C E I S D T K C P E Q D G F G N I A S S W V T | 265 |
| hCOLA1 .PRO | V S T Q R F K - . V K K I W D L W - . . R I L T I D G R P Q | 308 |
| Col9a1.pro | A H A S K M S S Y L P A K L E L K D Q C Q C I P N K G E A G | 263 |
| Col19a1.pro | | 295 |
| hCOLA1 .PRO | I A V T L N G V D K I L L F T T T S V I N G S Q V V T F A N | 338 |
| Col9a1.pro | - . T T D E R G P P G E Q G P P G A S G P P G V P G I D G | 290 |
| Col19a1.pro | L P G A T D E R G P G K G H K G E P G E N G L H G A P G F P G | 325 |
| hCOLA1 .PRO | P Q V K T L F D E G W H Q I R L L V T E Q D V T L Y I D D Q | 368 |
| Col9a1.pro | I D G - . . . D R G P K G P P G P P G P A G E P G K P G A P | 316 |
| Col19a1.pro | Q K G - . . . E Q G F E G S K G E T G E K G E Q G E K G D P | 351 |
| hCOLA1 .PRO | Q I E N K P L H P V L G I L I N G Q T Q I G K Y S G K E E T | 398 |
| Col9a1.pro | G K P G T P G A D G L T G P D G S P G S I G S K G G K G E P | 346 |
| Col19a1.pro | A L A G L N G E N G I K G V L G P H G P P G P K G E K G D T | 381 |
| hCOLA1 .PRO | V Q F D V Q K L - . R I Y C D P E Q N N R E T A C E I P G F | 426 |
| Col9a1.pro | G V P G S R G F P G R - G I P G P P G P P G T A G L P G E L | 375 |
| Col19a1.pro | G P P G P P A L P G S L G I Q G P Q G P P G K E G Q R G R R | 411 |
| hCOLA1 .PRO | C L N G P S D V G S T P A P C I C P P G K P G - | 449 |
| Col9a1.pro | G R V G P V G D P G R R G P - P G P P G P P G P R G T I G F | 404 |
| Col19a1.pro | G K T G P P G K P G P P G P - P G P P G I Q G I H Q T L G G | 440 |
| hCOLA1 .PRO | - L Q G P K G D P G L P G N P | 463 |
| Col9a1.pro | H D - G D P L C P N A C P P G R S G Y P G L P G M R | 429 |
| Col19a1.pro | D D N K D N K G N D E H E A G G L K G D K G E T G L P G F P | 470 |

FIG. 6A

| | | |
|-------------|---|-----|
| hCOLA1 .PRO | G Y P G Q P G Q D G K P G - - - - - | 476 |
| Col9al.pro | G H K G A K G E I G E P G R Q G H K G E E G D Q G E L G E V | 459 |
| Col19al.pro | G S V G P K G Q K G E P G E P F T K G E K G D R G E P G V I | 500 |
| hCOLA1 .PRO | - Y Q G I A G T P G V P G S P G I Q G A R G L P G Y K G E P | 505 |
| Col9al.pro | G A Q G P - - - - - P G A Q G L R G I T G L V G D K G E K | 483 |
| Col19al.pro | G S Q G V K G E P G D P G P P G L I G S P G L K G Q Q G S A | 530 |
| hCOLA1 .PRO | G R D G D K G D R G L P G F P G L H G M P G S K G E M G A K | 535 |
| Col9al.pro | G A R G L D G E P G P Q G L P G A - - - P G D Q G Q R G - | 508 |
| Col19al.pro | G S M G P R G P P G D V G L P G E H G I P G K Q G I K G E K | 560 |
| hCOLA1 .PRO | G D K G S - - - - P G F Y G K K G A K G E K G N A - - - - | 556 |
| Col9al.pro | - - - - - P P G E A G P K G D R G A - - - - | 521 |
| Col19al.pro | G D P G G I I G P P G L P G P K G E A G P P G K S L P G E P | 590 |
| hCOLA1 .PRO | - - - - - G F P G L P G P A G E - - - P G R H G K D G L M | 577 |
| Col9al.pro | - - E G A R G I P G I P G P K G D T G L P G V D G R D G - - | 547 |
| Col19al.pro | G L D G N P G A P G P R G P K G E R G L P G V H G S P G D I | 620 |
| hCOLA1 .PRO | G S P G F - - - - - K G E A G S P G A P G Q D G T R G | 599 |
| Col9al.pro | - - - - - I P G M P G T K G E P G K P G P P G D A G L Q G | 571 |
| Col19al.pro | G P Q G I G I P G R T G A Q G P A G E P G I Q G P R G L P G | 650 |
| hCOLA1 .PRO | E P G I P G F P G N R G L M G Q K G E I G P P G Q Q G K K G | 629 |
| Col9al.pro | L P G V P G I P G A K G V A G E K G S T G A P G K P G Q - - | 599 |
| Col19al.pro | L P G T P G T P G N D G V P G R D G K P G L P G P P G D P I | 680 |
| hCOLA1 .PRO | A - - - - - - - - - - - P G M P G I M G S N | 640 |
| Col9al.pro | - - - - - - - - - - - M G N S | 603 |
| Col19al.pro | A L P L L G D I G A L L K N F C G N C Q A S V P G L K S N K | 710 |
| hCOLA1 .PRO | G S P G Q P G T P G - - - - - | 650 |
| Col9al.pro | G K P G Q Q G P P G - - - - - E V G P R G P Q G L P | 624 |
| Col19al.pro | G E E G G A G E P G K Y D S M A R K G D I G P R G P P G I P | 740 |
| hCOLA1 .PRO | - - - - S K G S K G E P G I Q G M P G A S G L K G E P G A T | 676 |
| Col9al.pro | G S R G E L G P V G S P G L P G K L G S L G S P G L P G L P | 654 |
| Col19al.pro | G R E G P K G S K G E R G Y P G I P G E K G D E G L Q G I P | 770 |
| hCOLA1 .PRO | G S P G E P G Y M G L P G I Q G K K G D K G N Q G E K G I Q | 706 |
| Col9al.pro | G P P G L P G M K G D R G V V G - - - E P G P K G E Q G A S | 681 |
| Col19al.pro | G I P G A P G T G P P G L M G R T G H P G P T G A K G E K | 800 |
| hCOLA1 .PRO | G Q K G E N G R Q G I P G Q Q G I Q - - - - - | 724 |
| Col9al.pro | G E E G E A G E R G E L G D I G L P - - - - - | 699 |
| Col19al.pro | G S D G P P G K P G P P G P P G I P F N E R N G M S S L Y K | 830 |
| hCOLA1 .PRO | - - - - - - - - - - G H H G A K G E R G E K G E P G | 740 |
| Col9al.pro | - - - - - - - - - - G P K G S A G N P G E P G | 712 |
| Col19al.pro | I K G G V N V P S Y P G P P G P P G P K G D P G P V G E P G | 860 |
| hCOLA1 .PRO | V R G A I G S K G E S G V D G L M G P A G P K G Q P G D P G | 770 |
| Col9al.pro | L R G P E G S R G L P G V E G P R G P P G P R G V Q G E Q G | 742 |
| Col19al.pro | A M G L P G L E G F P G V K G D R G P A G P P G I A G M S G | 890 |
| hCOLA1 .PRO | P Q G P P G L D G K P G R E F S E Q F I R Q V C T D V I R A | 800 |
| Col9al.pro | A T G L P G V Q G P P G R A P T D Q H I K Q V C M R V I Q E | 772 |
| Col19al.pro | K P G A P G P P G V P G E P G E R G P V G D I G F P G P E G | 920 |
| hCOLA1 .PRO | Q L P V L L Q S G R - - I R N C D H C L S Q H G S P G I P G | 828 |
| Col9al.pro | H F A E M A A S L K R P D S G A T G L P G R P G P P G P P G | 802 |
| Col19al.pro | P S G K P G I N G K D G I P G A E G I M G K P G D R G P K G | 950 |
| hCOLA1 .PRO | P - - - - - P G P I G P E G P R G L P G L P G R D G V P G | 852 |
| Col9al.pro | P P G E N G F P G Q M G I R G - - - - - L P G I K G P P G | 826 |
| Col19al.pro | E R G D Q G I P G D R G S Q G E R G K P G L T G M K G A I G | 980 |

FIG. 6B

| | | |
|-------------|---|------|
| hCOLA1 .PRO | L V G V P G R P G V R G L K G L P G R N G E K G S Q G F . . | 880 |
| Col9a1.pro | A L G L R G P K G D L G E K G E R G P P G R | 848 |
| Col19a1.pro | P M G P P G N K G S M G S P G H Q G P P G S P G I P G I P A | 1010 |
| hCOLA1 .PRO | | 880 |
| Col9a1.pro | | 848 |
| Col19a1.pro | D A V S F E E I K K Y I N Q E V L R I F E E R M A V F L S Q | 1040 |
| hCOLA1 .PRO | | 894 |
| Col9a1.pro | | 862 |
| Col19a1.pro | L K L P A A M L A A Q A Y G R P G P P G K D G L P G P P G D | 1070 |
| hCOLA1 .PRO | E G P P G I S K E G P | 913 |
| Col9a1.pro | P G P A S Y G K N G R D G E R G P P G | 881 |
| Col19a1.pro | P G P Q G Y . . R G Q K G E R G E P G I G L P G S P G L P G | 1098 |
| hCOLA1 .PRO | K D | 938 |
| Col9a1.pro | | 906 |
| Col19a1.pro | T S A L G L P C S P G A P G P G P G P S G R C N P E D C | 1128 |
| hCOLA1 .PRO | F S V I A R R D P F R K G P N Y | 954 |
| Col9a1.pro | T M Q L V S . E H L T K G L T L E R L T A A W L S A | 931 |
| Col19a1.pro | L Y P V S H . A H Q R T G | 1142 |

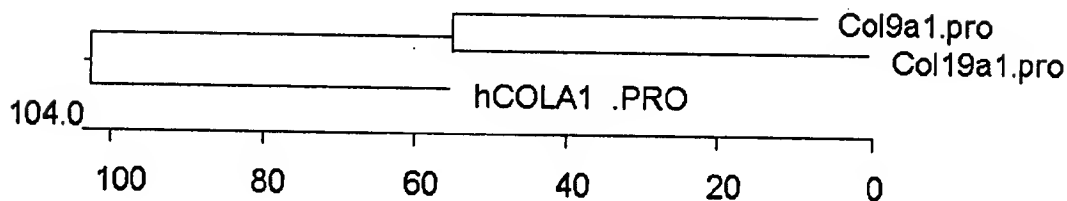


FIG. 6C

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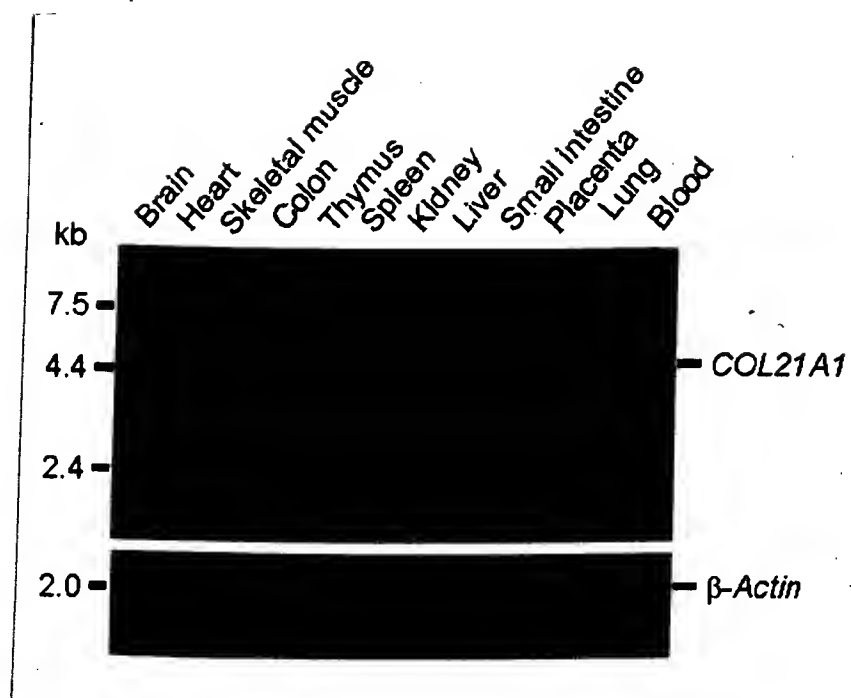


FIG. 7A

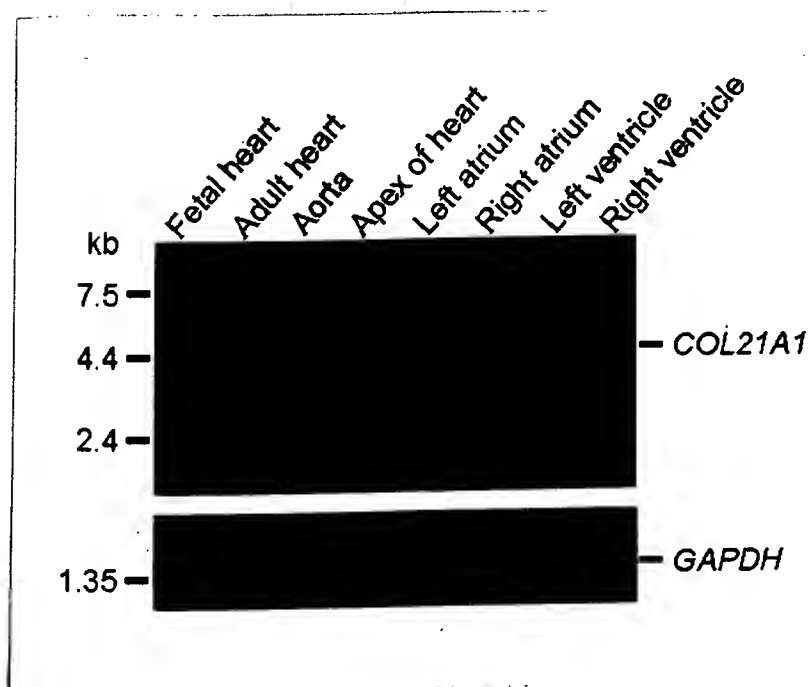


FIG. 7B

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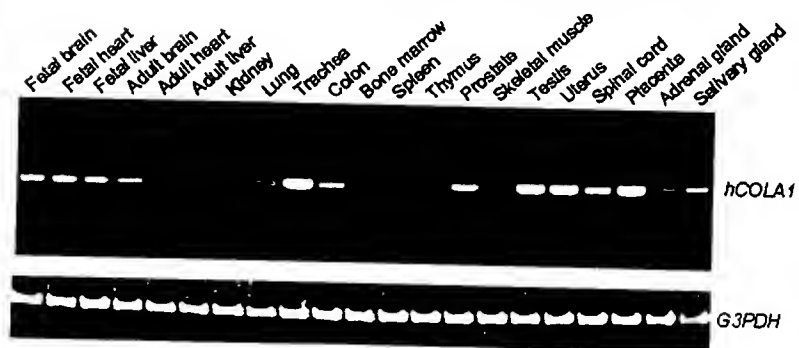


FIG. 8

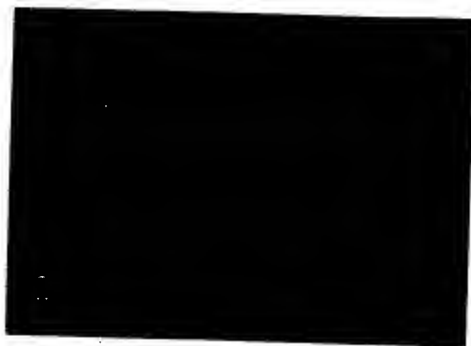


FIG. 9A

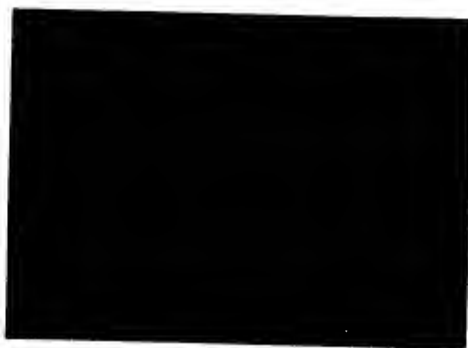


FIG. 9B



FIG. 9C

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FIG. 10A

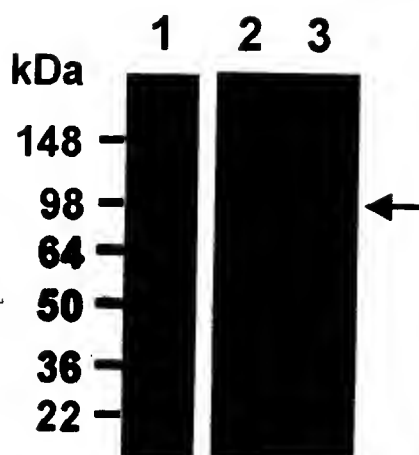


FIG. 10B

0905667 113004

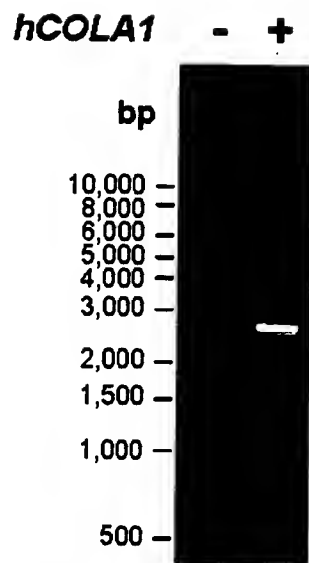


FIG. 11